IN THE CLAIMS

Please amend the claims as follows:

- 1. (Currently Amended): A mutant An isolated or purified Bacillus bacterium comprising:
- [[,]] on the genome or plasmid thereof,

DNA having a <u>a polynucleotide</u> promoter sequence recognized and transcribed specifically during the <u>a</u> sporulation stage, and

a polynucleotide sigA gene or a gene equivalent thereto that encodes a SigA polypeptide having the amino acid sequence of SEQ ID NO: 1 or a polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 1,

wherein the promoter sequence is located in a region of 1 to 198 bp upstream of, and operatively-linked to, said polynucleotide encoding sigA being ligated to an upstream end of the sigA gene or a gene equivalent thereto; and

wherein the promoter sequence is selected from the group consisting of a promoter sequence for expressing *sigH* gene of *Bacillus* and a promoter sequence for expressing *spolIA* operon of *Bacillus*.

2. (Currently Amended): The mutant isolated or purified Bacillus bacterium, wherein the promoter sequence is selected from the group consisting of a promoter sequence for expressing sigH gene of Bacillus that contains the nucleotide sequence ranging from base numbers 987 to 1,027 of SEQ ID NO: 2, and a promoter sequence for expressing spolIA operon of Bacillus that contains a nucleotide sequence ranging from base numbers 1,081 to 1,110 of SEQ ID NO: 3

as described in claim 1, wherein the promoter sequence specifically recognized and transcribed during the sporulation stage is a promoter sequence for expressing a sigH gene of

Application No. 10/590,275

Reply to Office Action of February 22, 2010

Bacillus subtilis or a sequence equivalent thereto and/or a promoter sequence for expressing a spollA operon of Bacillus subtilis or a sequence equivalent thereto.

- 3. (Currently Amended): The <u>isolated or purified mutant Bacillus</u> bacterium <u>of claim</u>

 <u>1</u> as described in claim 1 or 2, wherein a bacterium belonging to the genus <u>Bacillus</u> which is <u>Bacillus</u> subtilis.
- 4. (Currently Amended): The <u>isolated or purified Bacillus</u> bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide recombinant microorganism which is produced by introducing genes encoding heterologous proteins or polypeptides into the mutant *Bacillus* bacterium as described <u>by claim 1</u> in any one of claims 1 to 3.
- 5. (Withdrawn, Currently Amended): A method for producing a protein or a polypeptide comprising expressing a heterologous polynucleotide in the *Bacillus* bacterium of claim 4, and

recovering said protein or polypeptide

by use of the recombinant microorganism as described in claim 4.

- 6. (Withdrawn, Currently Amended): The method of claim 5 as described in claim 5, wherein the protein or polypeptide is a cellulase, amylase, or protease.
- 7. (Withdrawn, Currently Amended): The method of claim 5 as described in claim 6, wherein the protein or polypeptide comprises cellulase is an alkaline cellulase which has an amino acid sequence that is at least 70% homologous to SEQ ID NO: 4 represented by SEQ

Application No. 10/590,275

Reply to Office Action of February 22, 2010

ID NO: 4, or a protein which has a homology of 70% or more to the amino acid sequence and alkaline cellulase activity.

- 8. (Withdrawn, Currently Amended): The method of claim 5 as described in claim 6, wherein the protein or polypeptide comprises an amino acid sequence that is at least 70% homologous to SEQ ID NO: 19 amylase is an alkaline amylase which has an amino acid sequence represented by SEQ ID NO: 19, or a protein which has a homology of 70% or more to the amino acid sequence and alkaline amylase activity.
- 9. (Withdrawn, Currently Amended): The method of claim 5 as described in claim 6, wherein the protein or polypeptide comprises protease is an alkaline protease which has an amino acid sequence that is at least 70% homologous to SEQ ID NO: 21 represented by SEQ ID NO: 21, or a protein which has a homology of 70% or more to the amino acid sequence and alkaline protease activity.
- 10. (Currently Amended): A method for constructing the *Bacillus* bacterium of claim 1 comprising:

transforming a *Bacillus* bacterium with a polynucleotide comprising a promoter sequence recognized and transcribed specifically during a sporulation stage, a polynucleotide that encodes a SigA polypeptide having the amino acid sequence of SEQ ID NO: 1 or a polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 1, wherein the promoter sequence is located in a region of 1 to 198 bp upstream of, and operatively-linked to, said polynucleotide encoding *sigA*; and wherein the promoter sequence is selected from the group consisting of a promoter sequence for expressing *sigH* gene of *Bacillus* that contains the nucleotide sequence ranging from base numbers 987 to 1,027 of

SEQ ID NO: 2, and a promoter sequence for expressing *spoIIA* operon of *Bacillus* that contains a nucleotide sequence ranging from base numbers 1,081 to 1,110 of SEQ ID NO: 3

a mutant *Bacillus* bacterium, characterized by constructing, on the genome or a plasmid of a bacterium belonging to the genus *Bacillus*, DNA having a promoter sequence recognized and transcribed specifically during the sporulation stage, and a *sigA* gene or a gene equivalent thereto, the promoter sequence being ligated to an upstream end of the *sigA* gene or a gene equivalent thereto.

- 11. (New): The method of claim 10, wherein said promoter sequence is one for expressing *sigH* gene of *Bacillus* that contains the nucleotide sequence ranging from base numbers 987 to 1,027 of SEQ ID NO: 2.
- 12. (New): The method of claim 10, wherein said promoter sequence is one for expressing *spoIIA* operon of *Bacillus* that contains a nucleotide sequence ranging from base numbers 1,081 to 1,110 of SEQ ID NO: 3.
- 13. (New): The method of claim 10, wherein said *sigA* gene encodes a polypeptide comprising SEQ ID NO: 1.
- 14. (New): The isolated or purified *Bacillus* bacterium of claim 1, which has the promoter sequence and the polynucleotide encoding SigA protein integrated into its genomic DNA.

- 15. (New): The isolated or purified *Bacillus* bacterium of claim 1, wherein said *Bacillus* has the promoter sequence and the polynucleotide encoding SigA protein located on a plasmid.
- 16. (New): The isolated or purified *Bacillus* bacterium of claim 1, wherein said *sigA* gene encodes a polypeptide comprising SEQ ID NO: 1.
- 17. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide.
- 18. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 4.
- 19. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 19.
- 20. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 21.
- 21. (New): The isolated or purified *Bacillus* bacterium of claim 1, wherein the polypeptide is at least 70% homologous to the amino acid sequence of SEQ ID NO: 1 and

Application No. 10/590,275 Reply to Office Action of February 22, 2010

which participates in transcription of a gene which is essential for growth during the vegetative growth period of said *Bacillus* bacterium.